Project Name	InfotAiMOS
Online team meeting	https://fau.zoom.us/j/67792730528
Production system (if any)	tba
Test system (if any)	tba
GitHub repository	https://github.com/amosproj/amos2022ws02-automotive-test-app/
GitHub feature board	https://github.com/orgs/amosproj/projects/5
GitHub impediments backlog	https://github.com/orgs/amosproj/projects/6
Team T-shirt (black, male)	https://www.shirtinator.de/t-shirts/gestalten/t-shirt-bedrucken#/load/share/eca1c484-76e3-403a-8df9-b080a79b659f
Team T-shirt (black, female)	https://www.shirtinator.de/t-shirts/gestalten/t-shirt-bedrucken#/load/share/fb698f2d-07cd-4e63-9301-62e7e0d35a1b
Additional materials	

Last Name	First Name	GitHub User Name	Email Address
Rehm	Ronja	ronjarehm	ronja.rehm@fau.de
Schreiner	Stefanie	stefanieschreiner	stefanie.schreiner@fau.de
Wüllner	Corinna	i315315	corinna.wuellner@fau.de
Güder	Emre	EmreR7	emre.gueder@fau.de
Hausding	Anders	andy3189	a.hausding@campus.tu-berlin.de
Lang	Daniel	Da-Lang-CS	daniel.l.lang@fau.de
Müller	Hanna	hanna-212	hanna.mueller@fau.de
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Sulzbach	Lara	LaraSlzb	lara.sulzbach@fau.de
Tuncay	Berkan Ender	BETuncay	berkan.tuncay@fau.de
		•	

#	Meeting Day Product Owner	Software Developer	Release Manager	Scrum Master	Comment
1	2022-10-19 Corinna Wüllner, Stefanie	Everyone else	N/A	Ronja Rehm	
2	2022-10-26 Corinna Wüllner, Stefanie	Everyone else	Anders	Ronja Rehm	
3	2022-11-02 Corinna Wüllner, Stefanie	Everyone else	Berkan	Ronja Rehm	
4	2022-11-09 Corinna Wüllner, Stefanie	Everyone else	Daniel	Ronja Rehm	
5	2022-11-16 Corinna Wüllner, Stefanie	Everyone else	Emre	Ronja Rehm	
6	2022-11-23 Corinna Wüllner, Stefanie	Everyone else	Hanna	Ronja Rehm	
7	2022-11-30 Corinna Wüllner, Stefanie	Everyone else	Lara	Ronja Rehm	Mid-term due
8	2022-12-07 Corinna Wüllner, Stefanie	Everyone else	Tobias	Ronja Rehm	
9	2022-12-14 Corinna Wüllner, Stefanie	Everyone else	Anders	Ronja Rehm	
10	2023-01-11 Corinna Wüllner, Stefanie	Everyone else	Berkan	Ronja Rehm	
11	2023-01-18 Corinna Wüllner, Stefanie	Everyone else	Daniel	Ronja Rehm	
12	2023-01-25 Corinna Wüllner, Stefanie	Everyone else	Emre	Ronja Rehm	
13	2023-02-01 Corinna Wüllner, Stefanie	Everyone else	Hanna	Ronja Rehm	
14	2023-02-08 Corinna Wüllner, Stefanie	Everyone else	Lara	Ronja Rehm	Demo day!
15	2023-02-15 Corinna Wüllner, Stefanie	Everyone else	Tobias	Ronja Rehm	Retrospective
I					

d visually pleasing app; good team work; good grades; continuous work throughout the semester
e contribution; respectful environment
·
assigned to do, in the agreed time frame; in case of questions/struggles ask for help; set realistic goals; work
assigned to do, in the agreed time name, in base of questions straggles ask for neith, set realistic goals, work
and a maneting, placed informs the team each and dive information on work in tout forms
nd a meeting, please inform the team asap and give information on work in text-form
tructive communication; decisions should be made in consensus; if questions arise, take time to answer themm
have open communication about it, resolve issues in a respectful way; for assistance contact Scrum Master
es; give positive/negative feedback to team mates; exchange knowledge
s, give positive/negative recapacitie team mates, exemange knowledge
for a job well depos beyon a virtual beautogether
for a job well done; have a virtual beer together
o late to a meeting: sing a christmas carol
f

## **Product Vision Project Mission**

The importance of infotainment systems in cars is increasing and users expect more and more connectivity in the car (Handelsblatt, 2005). At the same time, to the specific needs of the respective manufacturers. With InfotAiMOS, our goal of these use cases in the context of navigation, steering wheel knobs, media is to create an OpenSource Android Automotive test app, which can be used by play, power management and vehicle properties. This app should therefore, various software developers of infotainment systems to help them with the development of other apps and thus, make their work easier.

The mission of this project is to develop a functioning Android Automotive test app, that can help to test and simulate different use cases of infotainment different car manufacturers use different infotainment systems, each customized systems immediately or with a time delay. It particularly focuses on the simulation provide the developers with a test system in which apps can be tested in a safe environment.

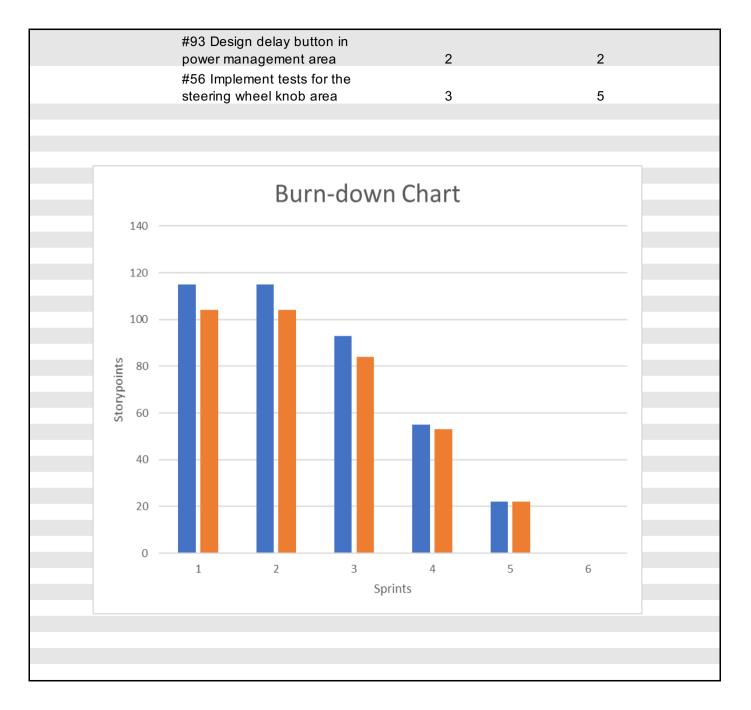
Term	Definition

Sprint	Theme Goal Feature Name	Est. Size	Est.	Real Size	Real Remaining
Releas					
Releas	ie				
	Total	115	0	104	0
Sprints	\$				
			nated burn-do		Real burn-down
1	Initial organizational tasks	0	115	0	104
2	Familarization with project	0	115	0	104
3	Implementation of Navigation Context Area	22	93	20	84
4	Development of Navigation & Steering Wheel	38	55	31	53
5	Development of additional Areas	33	22	31	22
6	Implementation of Vehicle Properties Use Cases	3 22	0	22	0
Featur	96				
i catur	G-3				
1	Initial organizational tasks				
-	Set up development environment and to	eam structures	S		
	#30 Set up development				
	#31 Set up SD kickoff-meeting				
	·				
2	Familarization with project				
	Familiarize with programming environme	r			
	#9 Familiarize with Android				
	Automotive				
	#10 Familiarize with test driven				
	development				
	•				
	#11 Familiarize with Android				
	development				
	#12 Familiarize with Kotlin				
	#27 Fill Bill of Materials				
	#28 Come up with Software				
	Architecture				
	#29 Create an App				
3	Implementation of Navigation Context Area				

Craata	area for navigation use sees		1			
Create	Create area for navigation use cases					
	#15 Design GUI for starting					
	page	3	3			
	#18 Implement GUI for use					
	cases in navigation context					
	area	3	3			
	#5 Design GUI for use cases in					
	navigation context area	3	3			
	•					
	#16 Implement functionality to					
	enter navigation use case area	3	2			
	#8 Simulate starting a		_			
	navigation	5	5			
	_	J	J			
	#14 Simulate ending a	3	2			
	navigation	3	2			
	#17 Implement back button to					
	previous page	2	2			
_	of Navigation and Steering Wheel Area		h l			
Furthe	r development of navigation area and imp	lementation of steering w	neel area			
	#61 Add an icon for the					
	application	2	2			
	#42 Design GUI for media play					
	area	2	3			
	#41 Implement functionality of					
	clicking on activeNavigation					
	Button	3	2			
	#39 Design GUI for showing					
	name and descriptions of					
	steering wheel buttons	3	2			
	otooting whool buttons		_			
	#20 Implement aliak dummu ta					
	#38 Implement click dummy to	2	0			
	implement button functionality	2	2			
	#37 Design GUI for steering	_	_			
	wheel	5	5			

		#35 Implement functionality of pressing a steering wheel button: voicecontrol	5	2
		#34 Implement functionality of pressing a steering wheel button: play/pause	5	2
		#33 Implement functionality of pressing a steering wheel button: skipForward	3	2
		#20 Implement functionality to enter steering wheel use case area	2	2
		#19 Design GUI for steering wheel area on starting page	3	2
		#13 Show that navigation is currently active	3	5
_				
5	•	f additional areas	-1	
		development of steering wheel, vehi	cie properties and pov	ver management area
		#55 Implement tests for the starting page	3	2
		#57 Implement tests for the navigation area	3	3
		#21 Implement GUI for steering		
		wheel in Android Studio	5	5
		#40 Implement functionality to show name and description when clicking on a button	3	3
		#66 Implement toggle button to switch between functionality		
		and description wheel	3	3

#25 Design GUI for vehicle properties area on starting page	5	5
#7 Implement GUI for use cases in the vehicle properties context area	2	2
#26 Implement functionality to enter vehicle properties use case area	2	2
#22 Design GUI for power management area on starting page	2	2
#24 Implement GUI for use cases in the power management context area	3	2
#23 Implement functionality to enter power management use case area	2	2
ouse area		_
n of Vehicle Properties Use Cases & Rep an Area to test Vehicle Properties	efactoring	
#58 Create the Build Process Video	5	5
#72 Implement functionality of pressing a steering wheel button: SeekForward	3	2
#51 Implement functionality to switch between day and night		
mode	5	5
#43 Implement functionality to enter media play use case area	2	2
#92 Design mute button in	<b>L</b>	۷
power management area	2	1



Mid-Project Release plan

Project 2 - InfotAiMOS - Planning Documents

Sprint	Theme Goal	Feature Name	Est. Size	Est.	Real Size	Real Remaining
Releas	e					
	Total		146	0	104	0
<b>Sprints</b>						
			Estim	ated burn-d	own	Real burn-down
1	Initial organizati		0	146	0	104
2	Familarization w		0	146	0	104
3	Implementation	of Navigation Context Area	22	124	20	84
4	Development of	Navigation & Steering Wheel	38	86	31	53
5	Development of	additional Areas	33	53	31	22
6	Implementation	of Vehicle Properties Use Cases	22	31	22	0
7	Implementation	of Timer Context Area &	31	0	0	0
8	Implementation	of Speech Assistant and	tbd.	tbd.	tbd.	tbd.
9	tbd.		tbd.	tbd.	tbd.	tbd.
10	Christmas Break	(	n/a	tbd.	n/a	n/a
11	tbd.		tbd.	tbd.	tbd.	tbd.
12	Finalization of A	рр	tbd.	tbd.	tbd.	tbd.
13	Last Adjustmen	ts for the Final Project Release	tbd.	tbd.	tbd.	tbd.
14	Creation of Fina	I Project Presentation	tbd.	tbd.	tbd.	tbd.
			tbd.	tbd.	tbd.	tbd.
Feature	es					
1	Initial organiza	tional tasks				
		development environment and tea	am structures	3		
		#30 Set up development branch in Github				
		#31 Set up SD kickoff-meeting				
2	Familarization	with project				
	Familiar	ize with programming environment	t			
		#9 Familiarize with Android Automotive				
		#10 Familiarize with test driven development				

		#11 Familiarize with Android development		
		#12 Familiarize with Kotlin		
		#27 Fill Bill of Materials		
		#28 Come up with Software Architecture		
		#29 Create an App		
•				
3	•	n of Navigation Context Area area for navigation use cases		
	Cleate	#15 Design GUI for starting		
		page	3	3
		#18 Implement GUI for use cases in navigation context		
		area	3	3
		#5 Design GUI for use cases in		
		navigation context area	3	3
		#16 Implement functionality to		
		enter navigation use case area	3	2
		#8 Simulate starting a navigation	5	5
		#14 Simulate ending a navigation	3	2
		#17 Implement back button to		
		previous page	2	2
4	Development o	of Navigation and Steering Wheel Area		
-		development of navigation area and imple	ementation of steering wh	neel area
		#61 Add an icon for the		
		application	2	2
		#42 Design GUI for media play		
		area	2	3

		#41 Implement functionality of clicking on activeNavigation		
		Button	3	2
		#39 Design GUI for showing name and descriptions of steering wheel buttons	3	2
		#38 Implement click dummy to implement button functionality	2	2
		#37 Design GUI for steering wheel	5	5
		#35 Implement functionality of pressing a steering wheel button: voicecontrol	5	2
		#34 Implement functionality of pressing a steering wheel button: play/pause	5	2
		#33 Implement functionality of pressing a steering wheel button: skipForward	3	2
		#20 Implement functionality to enter steering wheel use case area	2	2
		#19 Design GUI for steering wheel area on starting page	3	2
		#13 Show that navigation is currently active	3	5
5	•	f additional areas		
	Further	development of steering wheel, v	vehicle properties and power	er management area
		#55 Implement tests for the		•
		starting page	3	2
		#57 Implement tests for the	0	2
		navigation area	3	3

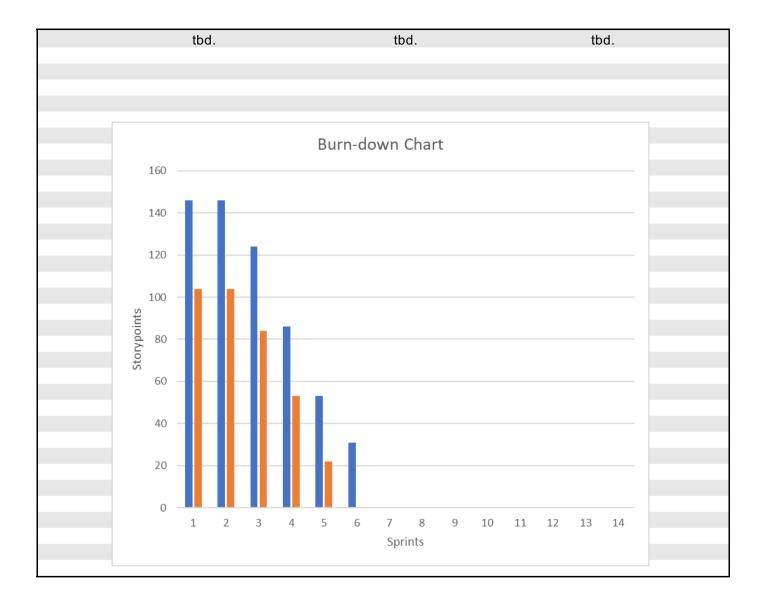
	#21 Implement GUI for steering wheel in Android Studio	5	5	
	#40 Implement functionality to show name and description	3	J	
	when clicking on a button	3	3	
	#66 Implement toggle button to switch between functionality and description wheel	3	3	
	#25 Design GUI for vehicle properties area on starting page	5	5	
	#7 Implement GUI for use cases in the vehicle properties context area	2	2	
	#26 Implement functionality to enter vehicle properties use case area	2	2	
	#22 Design GUI for power management area on starting page	2	2	
	#24 Implement GUI for use cases in the power management context area	3	2	
	#23 Implement functionality to enter power management use			
	case area	2	2	
6	Implementation of Vehicle Properties Use Cases 8  Develop an Area to test Vehicle Properties	Refactoring		
	#58 Create the Build Process Video	5	5	

	#72 Implement functionality of pressing a steering wheel		
	button: SeekForward	3	2
	#51 Implement functionality to switch between day and night mode	5	5
	mode		J
	#43 Implement functionality to enter media play use case area	2	2
	#92 Design mute button in	0	4
	power management area	2	1
	#93 Design delay button in power management area	2	2
	#56 Implement tests for the steering wheel knob area	3	5
	steering wheel knob area	<b>5</b>	J
7 Implementation	n of Timer Context & Speech Assistant A	.rea	
_	p an Area for the timer context and the Sp		
<b>D</b> 0 voio	•	occin modiciant	
	#100 Simulate speech		
	announcement in navigation	E	tbd.
	context area	5	lba.
	#113 Design GUI for App		41 1
	Settings area on starting page	2	tbd.
	#114 Implement functionality to		
	enter App Settings context are	1	tbd.
	#123 Implement GUI for use		
	cases in App Settings Context		
	area	2	tbd.
	#115 Move functionality for		
	switch between day/night mode		
	to App Settings context	2	tbd.
	#101 Design GUI for timer area		
	on starting page	2	tbd.

		#102 Implement functionality to enter timer use case area	1	tbd.	
		#117 Implement GUI for list in	'	tbu.	
		timer area	5	tbd.	
		#105 Design GUI for speech assistant area on starting page	2	tbd.	
		#106 Implement functionality to enter speech assistant use case area	1	tbd.	
		#124 Implement GUI for use cases in Speech Assistant context area	1	tbd.	
		#104 Implement functionality for timer in timer context area	5	tbd.	
		#103 Design Delay button in speech assistant area	2	tbd.	
8	•	of Speech Assistant and Vehic			
	Develop	o use cases in speech assistant a	and vehicle properties ar	rea	
		#54 Implement functionality to set the system in stand-by			
		mode	tbd.	tbd.	
		#107 Implement functionality of PTT speech assistant	tbd.	tbd.	
		#108 Implement functionality of TTT speech assistant	tbd.	tbd.	
		#109 Implement functionality to switch between left-hand drive	thd	the	
		and right-hand drive	tbd.	tbd.	
		#111 Implement functionality to switch between day and night			
		mode in the whole system	tbd.	tbd.	

		#116 Refactor GUI of starting page	tbd.	tbd.
		#110 Design tile to show vehicle identifier number in vehicle properties area	tbd.	tbd.
		#112 Design tile to show battery level in vehicle	tou.	ibu.
		properties area	tbd.	tbd.
9	tbd.			
		TBD: issues in this sprint, since we only get requirements from the industry partner week by		
	tbd.	week	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
40	Christmas Br	- alt		
10	n/a	еак		
	II/a			
11	tbd.			
		TBD: issues in this sprint, since we only get requirements from the industry partner week by		
	tbd.	week	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.

		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
12	Finalization of	Арр		
		TBD: issues in this sprint, since we only get requirements from the industry partner week by		
	tbd.	week	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
13	Last Adjustmer	nts for the Final Project Release	Ę	
		TBD: issues in this sprint, since we only get requirements from the industry partner week by		
	tbd.	week	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
14	Creation of Fin	al Duais at Duas autation		
14	Creation of Fina	al Project Presentation	1	
		TBD: issues in this sprint, since we only get requirements from the industry partner week by		
	tbd.	week	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
		tbd.	tbd.	tbd.
<u></u>		tbd.	tbd.	tbd.



#	Feature Definition of Done	Sprint Release Definition of Done	Project Release Definition of Done
	- Code compiles and builds	- DoD of each feature in the sprint release is met	- Everything from the Sprint release is fullfilled
	- Acceptance criteria are met	- No known severe bugs open	- All implemented features must be fully working
	- Tests have been written and were passed	<ul> <li>All feature tests were passed</li> </ul>	- Documentation is available
	- Code is peer-reviewed	- Feature is merged into the main branch	- APK is available
	- Feature is merged into development branch	- Implemented Issues are closed	
	- Documentation is updated	- Feature board is updated	
	- Bill of Materials is updated	- Sprint Release Candidate is properly tagged	
,	-	•	

Туре	Link / reference
user documentation	https://github.com/amosproj/amos2022ws02-automotive-test-app/wiki/User-documentation
build documentation	https://github.com/amosproj/amos2022ws02-automotive-test-app/wiki/Build-Documentation
design documentation	https://github.com/amosproj/amos2022ws02-automotive-test-app/wiki/Design-Documentation

#	Context	Name	Version	License	Comment
1	junit	junit	4.13.2	Eclipse Public	https://github.com/junit-team/junit4
2	androidx.core	core-ktx	1.9.0	Apache 2.0	https://github.com/androidx/androidx
3	androidx.appcompat	appcompat	1.5.1	Apache 2.0	
4	androidx.test.ext	junit	1.1.3	Apache 2.0	
5	androidx.test.espresso	espresso-core	3.4.0	Apache 2.0	
6	androidx.activity	activity-ktx	1.6.1	Apache 2.0	
7	androidx.constraintlayout	constraintlayout	2.1.4	Apache 2.0	
8	androidx.media	media	1.6.0	Apache 2.0	
9	androidx.fragment	fragment-ktx	1.5.4	Apache 2.0	
10	com.google.android.material	material	1.7.0	Apache 2.0	https://github.com/material-components/material-
11	JLLeitschuh	ktlint-gradle	11.0.0	MIT license	https://github.com/JLLeitschuh/ktlint-gradle
12	androidx.lifecycle	lifecycle-*	2.5.1	Apache 2.0	https://github.com/androidx/androidx
13	androidx.navigation	navigation	2.5.3	Apache 2.0	
14	org.hamcrest.Matchers	hamcrest matcher	1,3	BSD-3-Clause	https://github.com/hamcrest/JavaHamcrest
15	io.mockk	mockk	1.13.2	Apache 2.0	https://github.com/mockk/mockk
16	androidx.car.app	Car App	1.3.0	Apache 2.0	

Last Name	First Name	Value			
Rehm	Ronja				
Schreiner	Stefanie		#####	#####	
Wüllner	Corinna				
Güder	Emre				
Hausding	Anders		0	No size	
Lang	Daniel		1	Trivial size	
Müller	Hanna		2	Small size	
Schmid	Tobias		3	Medium size	
Sulzbach	Lara		5	Large size	
Tuncay	Berkan Ender		8	Very large size	
			13	Too large (size)	